

PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE INSTALLATION OF LED SIGNAL HEADS, IP-BASED VIDEO DETECTION CAMERAS, COUNTDOWN PEDESTRIAN SIGNAL HEADS, ACCESSIBLE PEDESTRIAN PUSHBUTTONS AND SIGNS AT THE INTERSECTION OF MD 355 (FREDERICK ROAD) AT SOUTH MALL ENTRANCE. MD 355 IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION.

INTERSECTION OPERATION

THE INTERSECTION WILL CONTINUE TO OPERATE IN A NEMA FOUR-PHASE FULL-TRAFFIC-ACTUATED MODE WITH AN ALTERNATE PEDESTRIAN PHASE FOR THE SOUTH LEG AND A CONCURRENT PEDESTRIAN PHASE FOR THE WEST LEG OF THE INTERSECTION. THE MD 355 NORTHBOUND LEFT TURN OPERATES IN EXCLUSIVE-PERMISSIVE PHASING. A RIGHT TURN OVERLAP IS PROVIDED FOR THE MALL ENTRANCE APPROACH.

CONTROL LER REQUIREMENTS

THE EXISTING FULL TRAFFIC-ACTUATED EIGHT-PHASE TRAFFIC SIGNAL CONTROLLER HOUSED IN A BASE MOUNTED CABINET SHALL REMAIN. A 2-WIRE APS CENTRAL CONTROL UNIT SHALL BE FURNISHED BY THE CONTRACTOR AND INSTALLED BY MONTGOMERY COUNTY FORCES. IP-BASED VIDEO DETECTION INTERFACE EQUIPMENT SHALL BE FURNISHED BY SHA AND INSTALLED BY MONTGOMERY COUNTY FORCES.

SPECIAL NOTES

APS WILL FUNCTION AS FOLLOWS:

TO CROSS MD 355 (FREDERICK ROAD)

- A. WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT MESSAGE WILL BE "WAIT TO CROSS FREDERICK AT DRIVEWAY. WAIT."
- B. WHEN WALK PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

TO CROSS DRIVEWAY:

- A. WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT MESSAGE WILL BE "WAIT TO CROSS DRIVEWAY AT FREDERICK. WAIT."
- B. WHEN WALK PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

EQUIPMENT LIST "B"

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR

ITEM NO.	DESCRIPTION
203030	TEST PIT EXCAVATION
585621	12 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
585625	24 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
800000	16 INCH LED COUNTDOWN PEDESTRIAN SIGNAL HEAD
800000	REMOVE AND DISPOSE OF EQUIPMENT AND MATERIALS
800000	DISCONNECT, PULL BACK & REROUTE EXISTING CABLE
800000	ADJUSTABLE TACTILE PEDESTRIAN PUSHBUTTON STATION AND SIGN
800000	2-WIRE APS CENTRAL CONTROL UNIT
800000	IP-BASED VIDEO DETECTION CAMERA WITH LEAD-IN CABLE
801004	CONCRETE FOR SIGNAL FOUNDATION
801106	WOOD SIGN SUPPORTS 4 INCH X 6 INCH
802501	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
805125	2 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
805155	4 INCH SCHEDULE 80 RIGID PVC CONDUIT - SLOTTED
811001	FURNISH AND INSTALL ELECTRICAL HANDHOLE
813014	INSTALL GROUND MOUNTED SIGN
813015	INSTALL OVERHEAD SIGN
818004	10 FOOT BREAKAWAY PEDESTAL POLE
837001	GROUND ROD - 3/4 INCH DIAMETER X 10 FOOT LENGTH
860284	12 INCH LED VEHICULAR TRAFFIC SIGNAL HEAD SECTION
861105	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)
861107	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)
861108	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)

C. ALL MATERIALS TO BE REMOVED BY THE CONTRACTOR SHALL BECOME THE PROPERTY OF THE CONTRACTOR

CONTACT PERSONS FOR DISTRICT #3
ARE AS FOLLOWS:

ASSISTANT DISTRICT ENGINEER - TRAFFIC
PHONE: (301) 513-7404

MR. AUGUSTINE REBISH
DEPUTY DISTRICT ENGINEER - MAINTENANCE
(301) 513-7331

MR. DUANE BERNARD
ASSISTANT DISTRICT ENGINEER - CONSTRUCTION
(301) 513-7341

CONTACT PERSONS FOR OOTS ARE AS FOLLOWS:

MR. ROBERT SNYDER
ASSISTANT DIVISION CHIEF
TRAFFIC OPERATIONS
(410)787-7630

MR. ED RODENHIZER
CHIEF, SIGNAL OPERATIONS
(410)787-7650

MR. EUGENE BAILEY
CHIEF, SIGN OPERATIONS
(410)787-7676

GENERAL NOTES

1. THE CONTRACTOR SHALL VERIFY ALL PROPOSED POLE LOCATIONS PRIOR TO INSTALLATION.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TERMINATING ALL SIGNAL CABLE TO THE APPROPRIATE TERMINALS AND PROPERLY LABELING EACH CABLE.
3. ALL UNUSED CABLE SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR.
4. UNDERGROUND UTILITIES SHOWN ON THESE PLANS ARE SCHEMATIC ONLY AND MAY NOT BE COMPLETE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING "MISS UTILITY" PRIOR TO CONSTRUCTION SO THAT ALL UTILITIES MAY BE LOCATED IN THE FIELD. IF THE CONTRACTOR PERCEIVES THAT A CONFLICT BETWEEN THE UTILITIES AND THE TRAFFIC SIGNAL WILL OCCUR, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER IMMEDIATELY SO THAT THE CONFLICT MAY BE RESOLVED.
5. ALL PEDESTAL FOUNDATION TOPS SHALL BE INSTALLED FLUSH WITH SIDEWALK GRADE.
6. LOCATION OF ACCESSIBLE PEDESTRIAN SIGNAL PUSHBUTTONS MUST MEET LOCATION REQUIREMENTS OF MUTCD SECTION 4E.10, MUTCD FIGURES 4E.3 AND 4E.4, AND THE NCHRP PUBLICATION, "ACCESSIBLE PEDESTRIAN SIGNALS: GUIDE TO BEST PRACTICE." IF NOT MET, THE CONTRACTOR IS TO STOP WORK ON PUSHBUTTON LOCATIONS UNTIL A DESIGN WAIVER IS OBTAINED, APPROVED BY THE DIRECTOR, OFFICE OF TRAFFIC AND SAFETY.
7. PUSHBUTTONS ARE TO BE LOCATED SO THAT THEY CAN BE ACTIVATED BY A PERSON IN A WHEELCHAIR REACHING LESS THAN 18" FROM A 60" X 60" LEVEL LANDING AREA WITH A CROSS SLOPE OF LESS THAN OR EQUAL TO 2%.
8. THE 10' SEPARATION BETWEEN PUSHBUTTONS IS TO BE MEASURED FROM FACE OF PUSHBUTTON TO FACE OF PUSHBUTTON. NOT CENTER OF POLE TO CENTER OF POLE.
9. PUSHBUTTON ARROWS AND SIGNS ARE TO BE ORIENTED PARALLEL TO THE CROSSING FOR WHICH THEY ARE INTENDED.
10. VIDEO DETECTION CAMERA ALIGNMENT SHALL BE COORDINATED WITH THE ENGINEER.
11. THE CONTRACTOR SHALL CONTACT ED RODENHIZER AT THE SIGNAL SHOP (410) 787-7652 TO DELIVER APS EQUIPMENT FOR TESTING.

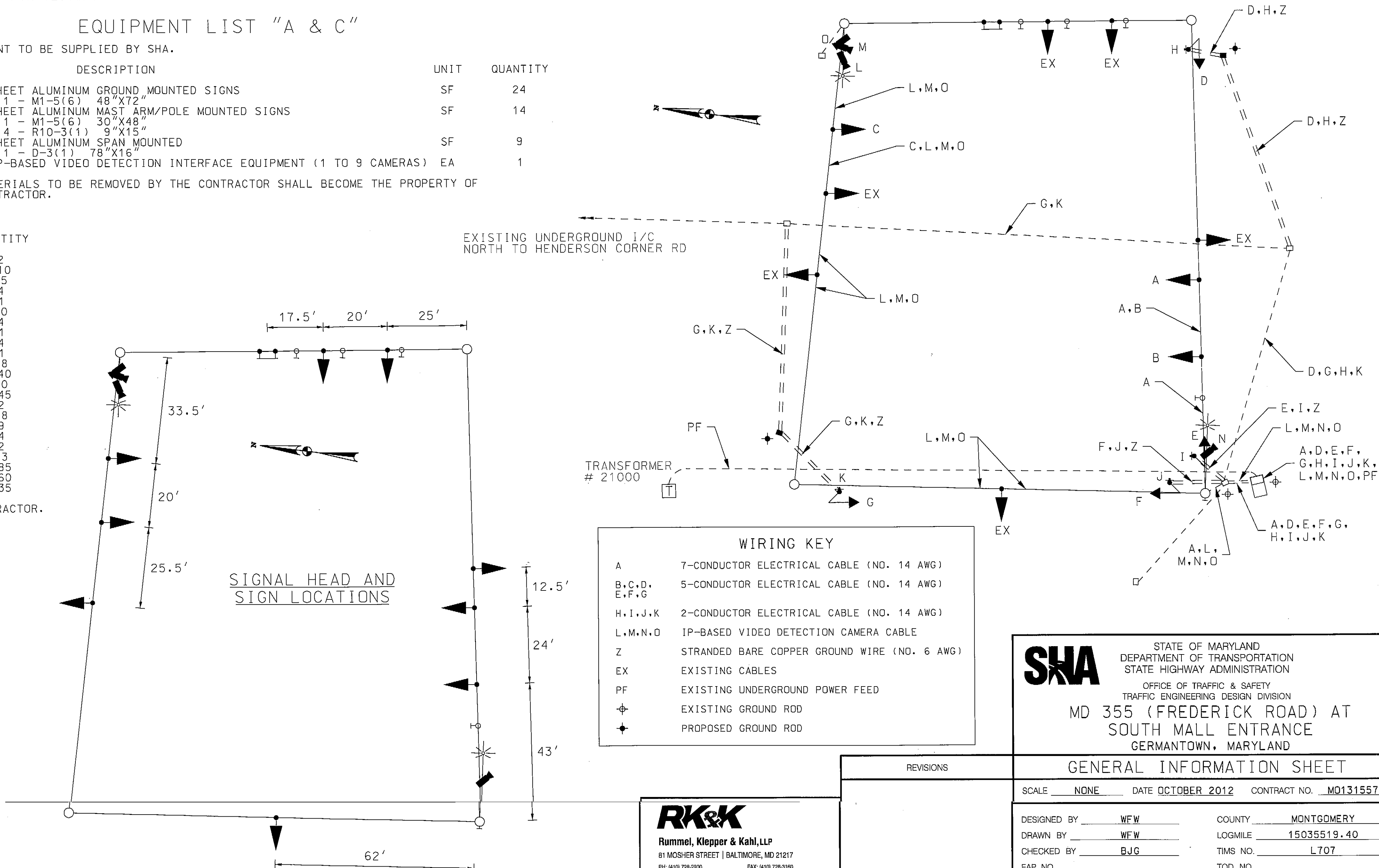
EQUIPMENT LIST "A & C"

A. EQUIPMENT TO BE SUPPLIED BY SHA

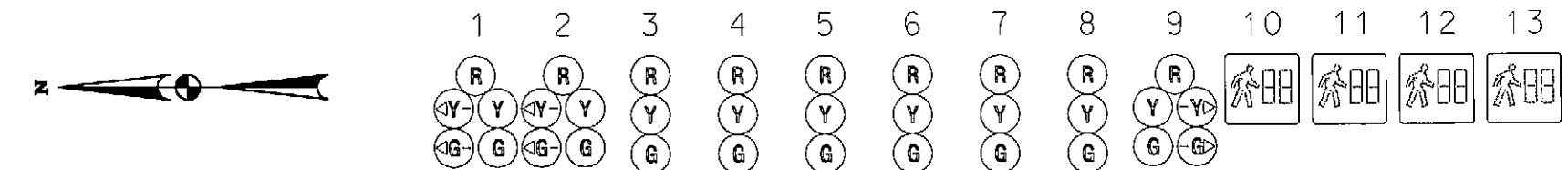
ITEM NO.	DESCRIPTION	UNIT	QUANTITY
900000	SHEET ALUMINUM GROUND MOUNTED SIGNS 1 - M1-5(6) 48"x72"	SF	24
900000	SHEET ALUMINUM MAST ARM/POLE MOUNTED SIGNS 1 - M1-5(6) 30"x48" 4 - R10-3(1) 9"x15"	SF	14
900000	SHEET ALUMINUM SPAN MOUNTED 1 - D-3(1) 78"x16"	SF	9
900000	IP-BASED VIDEO DETECTION INTERFACE EQUIPMENT (1 TO 9 CAMERAS)	EA	1

C. ALL MATERIALS TO BE REMOVED BY THE CONTRACTOR SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

UNIT	QUANTITY
CY	2
LF	410
LF	95
EA	4
LS	1
LF	50
EA	4
EA	1
EA	4
CY	1
LF	38
LF	240
LF	80
LF	145
EA	2
SF	38
SF	9
EA	4
EA	2
EA	33
LF	685
LF	760
LF	135



PHASING CHART



PHASE 1 AND 6		G	G	G	R	R	R	R	R	R	DW	DW	DW	DW	
1 CHANGE				G	R	R	R	R	R	R	DW	DW	DW	DW	
PHASE 2 AND 6		G	G	G	G	G	R	R	R	R	DW	DW	WK	WK	
PED CLEARANCE		G	G	G	G	G	R	R	R	R	DW	DW	FL/DW	FL/DW	
2 AND 6 CHANGE		Y	Y	Y	Y	Y	Y	R	R	R	DW	DW	DW	DW	
PHASE 4		R	R	R	R	R	R	G	G	G	DW	DW	DW	DW	
4 CHANGE		R	R	R	R	R	R	Y	Y	Y	DW	DW	DW	DW	
PHASE 4 ALT		R	R	R	R	R	R	G	G	G	WK	WK	DW	DW	
PED CLEARANCE		R	R	R	R	R	R	G	G	G	FL/DW	FL/DW	DW	DW	
4 ALT CHANGE		R	R	R	R	R	R	Y	Y	Y	DW	DW	DW	DW	
FLASHING OPERATION		FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	DARK	DARK	DARK	DARK	

REV. WELW

PLOTTED: Monday, October 22, 2012 AT 05:10 PM
FILE: \\rkkm\2008\2008\08148 icddes\Task 130 MD 355 Signals\CADD\PSG-0007 MD355@SouthMall-GI.dgn